## IN THE CLAIMS:

Please amend claims 1-18 as follows.

1.    (Currently Amended)    A method for managing the dispatching of TCP segments in a wireless telecommunication network, wherein the method comprises the step of:

sending TCP segments to a PDCP layer;

~~characterised in that~~ wherein the method further comprises the steps of:

storing TCP segments on a buffer as PDCP segments, said TCP segments not being said retransmitted TCP segments;

discarding those TCP segments whose corresponding original PDCP segments are already in said buffer;

discarding those TCP segments that have already been positively acknowledged by a TCP receiver;

removing PDCP segment(s) from said buffer based on a positive TCP acknowledgement message from said TCP receiver; and

if a negative acknowledgement is received for a PDCP segment from the RLC layer, retransmitting the PDCP segment from said buffer to said RLC layer.

2.    (Currently Amended)    The method according to claim 1, ~~characterised in that~~ wherein the method comprises the steps of:

extracting the TCP sequence number from a TCP segment before compressing the TCP segment header;

creating a correspondence between the TCP sequence number and the PDCP sequence number;

storing said correspondence information; and

storing said TCP segments on a buffer in the PDCP layer as PDCP segments.

3. (Currently Amended) The method according to claim 1, wherein ~~or 2, characterised in that~~ storing the TCP sequence number of the last positively acknowledged TCP segment as a limit A.

4. (Currently Amended) The method according to ~~any of the claims 1, 2 or 3, characterised in that~~ claim 1, wherein the method comprises the steps of:

receiving a positive acknowledgement message for a TCP segment from said TCP receiver;

extracting the TCP sequence number from said positive acknowledgement message;

checking the TCP sequence numbers of the PDCP segments in said buffer; and

removing all the PDCP segment(s) whose corresponding TCP sequence numbers are equal to or lower than said limit A from said buffer.

5. (Currently Amended) The method according to claim 1, wherein ~~or 2, characterised in that~~ the method comprises the steps of:

reading acknowledgement messages from said RLC layer; and when an acknowledgement message is a negative acknowledgement message of a PDCP segment,

extracting the PDCP sequence number from said negative acknowledgement message; and

retransmitting the PDCP segment corresponding to said PDCP sequence number form said buffer to said RLC layer.

6. (Currently Amended) The method according to claim 1, wherein ~~or 2, characterised in that~~ the method comprises the steps of:

reading acknowledgement message from said RLC layer; and when an acknowledgement message is a positive acknowledgement message of a PDCP segment,

discarding said positive acknowledgement message.

7. (Currently Amended) The method according to claim 1, ~~characterised in that~~ wherein the method comprises the step of:

allowing a retransmitted TCP segment to be sent to said RLC layer.

8. (Currently Amended) A protocol entity arranged for managing the dispatching of TCP segments in a wireless telecommunication network,

~~characterized in that~~ wherein the protocol entity comprises:

a first interface (IF1) for reading the TCP segment flow to the PDCP layer and RLC acknowledgements from the RLC layer;

a second interface (IF2) for reading TCP acknowledgements from a TCP receiver;

means for extracting (EM) a TCP sequence number from a TCP segment before header compression;

a memory (MEM) for storing the correspondence information between a TCP sequence number and a PDCP sequence number;

means for accessing (ACM) a buffer in the PDCP layer wherein the PDCP segments transmitted to said RLC layer are stored;

means for discarding (DM) a TCP segment whose original version is already in said buffer;

means for discarding (DM) a TCP segment that has already been positively acknowledged by the TCP receiver;

means for removing (REM) PDCP segment (s) from said buffer based on a positive TCP acknowledgement message from said TCP receiver; and

means for retransmitting (RM) a PDCP segment from said buffer to said RLC layer when a negative acknowledgement is received for the PDCP segment.

9. (Currently Amended) The protocol entity according to claim 8, ~~characterised in that~~ wherein the protocol entity comprises a memory (MEM) for storing the TCP sequence number of the last positively acknowledged TCP segment as a limit A.

10. (Currently Amended) The protocol entity according to claim 8, wherein ~~or 9 characterised in that~~ the protocol entity comprises means for allowing (AM) a retransmitted TCP segment to be sent to said RLC layer.

11. (Currently Amended) The protocol entity according to ~~any of the claims 8, 9 or 10, characterised in that~~ claim 8, wherein the protocol entity is arranged in said PDCP layer.

12. (Currently Amended) A system for managing the dispatching of TCP segments in a wireless telecommunication network, said wireless telecommunication network comprising at least:

an originating PDCP layer (PDPC-RNC) receiving TCP segments;

an originating RLC layer (RLC-RNC) receiving PDCP segments from said PDCP layer;

a receiving RLC layer (RLC-UE);

a receiving PDCP layer (PDCP-UE);

a TCP receiver (TCP-UE);

~~characterised in that~~ wherein the system comprises a protocol entity (DTCPP) comprising:

a first interface (IF1) for reading the TCP segment flow to said originating PDCP layer (RNC-PDCP) and RLC acknowledgements from the originating RLC layer (RLC-RNC);

a second interface (IF2) for reading TCP acknowledgements from said TCP receiver (TCP-UE);

means for extracting (EM) the TCP sequence number from a TCP segment before header compression;

a memory (MEM) for storing the correspondence information between a TCP sequence number and a PDCP sequence number;

means for accessing (ACM) a buffer in said originating PDCP layer (RNC-PDCP) wherein the PDCP segments transmitted to said RLC layer are stored;

means for discarding (DM) a TCP segment whose original version is already in said buffer;

means for discarding (DM) a TCP segment that has already been positively acknowledged by said TCP segment receiver (TCP-UE);

means for removing (REM) PDCP segment(s) from said buffer based on a positive

TCP acknowledgement message from said TCP receiver (TCP-UE); and

means for retransmitting (RM) a PDCP segment from said buffer when a negative

acknowledgement is received for the PDCP segment.

13. (Currently Amended) The system according to claim 12, ~~characterised in that~~ wherein the system comprises a memory (MEM) for storing the TCP sequence number of the last positively acknowledged TCP segment as a limit A.

14. (Currently Amended) The system according to claim 12, wherein ~~or 13, characterised in that~~ the system comprises means for allowing (AM) a retransmitted TCP segment to be sent to said originating RLC layer.

15. (Currently Amended) The system according to ~~any of the claims 12, 13 or 14, characterised in that~~ claim 12, wherein said protocol entity (DTCPP) is arranged in said originating PDCP layer.

16. (Currently Amended) The system according to ~~any of the claims 12, 13, 14 or 15, characterised in that~~ claim 12, wherein said receiving RLC layer, receiving PDCP layer and TCP receiver are located in the user equipment (UE) and/or in the radio network controller (RNC) of the wireless telecommunication network.

17. (Currently Amended) The system according to ~~any of the claims 12, 13, 14, 15 or 16, characterised in that~~ claim 12, wherein said originating PDCP layer and originating RLC layer are located in the user equipment (UE) and/or in the radio network controller (RNC) of the wireless telecommunication network.

18. (Currently Amended) The system according to ~~any of the claims 12, 13, 14, 15 or 16, characterised in that~~ claim 12, wherein said wireless telecommunication network is the Universal Mobile Telecommunications System (UMTS).